



Figure S15 Uncorrected p-value distributions for the AIC-based CMST tests with data simulated from model F in Figure 5. Results based on 1,656,261 tests. For these simulations, the M_1 call is the correct one, hence the skewed distribution towards small p-values at the left panels. The skewness towards larger p-values for the M_2 , M_3 , and M_4 calls follows from the fact that whenever a p-value for one model is smaller than α , then the p-values for the other three models are greater than $1 - \alpha$. Note the larger frequency of small M_1 p-values for the non-parametric CMST test (bottom left panel - the discrete nature of the histogram is a consequence of the test statistic being discrete for the non-parametric test).